

AMENDMENTS TO THE CLAIMS

Please cancel Claims 1 to 32.

Please add new claims 33 to 64.

Claims 1 to 32 (Cancelled)

33. (New) An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a polypeptide having metalloproteinase activity, wherein said polypeptide has at least 95.0% identity to a member of the group consisting of:

(a) a polypeptide corresponding to amino acids 1 to 414 of SEQ ID NO:2 including the start codon;

(b) a polypeptide corresponding to amino acids 2 to 414 of SEQ ID NO:2 minus the start codon;

(c) a polypeptide corresponding to amino acids 148 to 414 of SEQ ID NO:2 including the start codon;

(d) a polypeptide corresponding to amino acids 149 to 414 of SEQ ID NO:2 minus the start codon;

(e) a polypeptide corresponding to amino acids 176 to 414 of SEQ ID NO:2;

(f) a polypeptide encoded by the cDNA clone contained in ATCC Deposit No: PTA-2766; and

(g) a polypeptide comprising at least 274 contiguous amino acids of SEQ ID NO:2;

wherein percent identity is determined using a CLUSTALW global sequence alignment algorithm.

34. (New) The isolated nucleic acid molecule of claim 33, wherein said polynucleotide encodes a polypeptide having at least 95.0% identity to the polypeptide provided as (a).

35. (New) The isolated nucleic acid molecule of claim 33, wherein said polynucleotide encodes a polypeptide having at least 95.0% identity to the polypeptide provided as (b).

36. (New) The isolated nucleic acid molecule of claim 33, wherein said polynucleotide encodes a polypeptide having at least 95.0% identity to the polypeptide provided as (c).

37. (New) The isolated nucleic acid molecule of claim 33, wherein said polynucleotide encodes a polypeptide having at least 95.0% identity to the polypeptide provided as (d).
38. (New) The isolated nucleic acid molecule of claim 33, wherein said polynucleotide encodes a polypeptide having at least 95.0% identity to the polypeptide provided as (e).
39. (New) The isolated nucleic acid molecule of claim 33, wherein said polynucleotide encodes a polypeptide having at least 95.0% identity to the polypeptide provided as (f).
40. (New) The isolated nucleic acid molecule of claim 33, wherein said polynucleotide encodes a polypeptide having at least 95.0% identity to the polypeptide provided as (g).
41. (New) The isolated nucleic acid molecule of Claim 33, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 38 to 156 of SEQ ID NO:2.
42. (New) The isolated nucleic acid molecule of Claim 33; wherein said encoded polypeptide comprises one or more amino acid substitutions at amino acid positions 48, 97, and 146 of SEQ ID NO:2.
43. (New) The isolated nucleic acid molecule of Claim 33, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 63 to 80 of SEQ ID NO:2.
44. (New) The isolated nucleic acid molecule of Claim 33, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 125 to 146 of SEQ ID NO:2.
45. (New) The isolated nucleic acid molecule of Claim 33, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 306 to 315 of SEQ ID NO:2.
46. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 33.
47. (New) A recombinant host cell comprising the vector sequences of claim 46.
48. (New) The recombinant host cell of claim 47 that expresses a polypeptide having a sequence provided as SEQ ID NO:2.

49. (New) A method of making an isolated polypeptide comprising:
(a) culturing the recombinant host cell of claim 48 under conditions such that said polypeptide is expressed; and
(b) recovering said polypeptide.
50. (New) The isolated polynucleotide of claim 33 wherein said nucleic acid sequence further comprises a heterologous nucleic acid sequence.
51. (New) The isolated polynucleotide of claim 50 wherein said heterologous nucleic acid sequence encodes a heterologous polypeptide.
52. (New) The isolated polynucleotide of claim 51 wherein said heterologous polypeptide is the Fc domain of immunoglobulin.
53. (New) An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a polypeptide corresponding to amino acids 176 to 414 of SEQ ID NO:2, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 306 to 315 of SEQ ID NO:2, wherein said polypeptide has metalloproteinase activity.
54. An isolated nucleic acid molecule comprising a polynucleotide sequence encoding a polypeptide corresponding to amino acids 2 to 414 of SEQ ID NO:2, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 38 to 156 of SEQ ID NO:2, wherein said polypeptide has metalloproteinase activity.
55. (New) The isolated nucleic acid molecule of Claim 54, wherein said encoded polypeptide comprises one or more amino acid substitutions at amino acid positions 48, 97, and 146 of SEQ ID NO:2.
56. (New) The isolated nucleic acid molecule of Claim 54, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 63 to 80 of SEQ ID NO:2.
57. (New) The isolated nucleic acid molecule of Claim 54, wherein said encoded polypeptide comprises one or more amino acid substitutions residing within the region embodied by amino acid positions 125 to 146 of SEQ ID NO:2.
58. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 54.

59. (New) A recombinant host cell comprising the vector sequences of claim 58.
60. (New) The recombinant host cell of claim 59 that expresses a polypeptide having a sequence provided as SEQ ID NO:2.
61. (New) A method of making an isolated polypeptide comprising:
 - (a) culturing the recombinant host cell of claim 60 under conditions such that said polypeptide is expressed; and
 - (b) recovering said polypeptide.
62. (New) The isolated polynucleotide of claim 54 wherein said nucleic acid sequence further comprises a heterologous nucleic acid sequence.
63. (New) The isolated polynucleotide of claim 62 wherein said heterologous nucleic acid sequence encodes a heterologous polypeptide.
64. (New) The isolated polynucleotide of claim 63 wherein said heterologous polypeptide is the Fc domain of immunoglobulin.